United States of America

DRAFT PROPOSAL FOR THE WORK OF THE CONFERENCE

Agenda Item 1.4: to consider the results of studies related to **Resolution 114 (WRC-95)**, dealing with the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to non-GSO MSS feeder links), and review the allocations to the aeronautical radionavigation service and the fixed-satellite service in the band 5 091-5 150 MHz;

Background Information: The frequency band 5 000-5 250 MHz is allocated on an international basis to the aeronautical radionavigation service (ARNS). Currently only the 5 030-5 150 MHz portion has a defined ARNS function; namely the microwave landing system (MLS), with only the 5 030-5 091 MHz portion containing defined MLS channels. However, the International Civil Aviation Organization (ICAO) has identified the band 5 091-5 150 MHz for expansion for MLS. In addition, the aviation community is exploring other applications in the 5 091 - 5 150 MHz band. The fixed satellite service (FSS) (Earth-to-space), limited to non-geostationary (non-GSO) mobile-satellite service (MSS) feeder links, is also allocated to the band 5 091-5 150 MHz in accordance with **5.444A**. Also, FSS is allocated on a primary (Earth-to-space) in the band 5 150-5 250 MHz for the use of feeder uplinks for non-GSO MSS systems (**5.447A**). The 5 091-5 150 MHz band was allocated on a co-primary basis to the FSS for NGSO MSS feeder uplinks under **5.444A** with the conditions that:

- prior to 1 January 2010, the use of the band 5 091-5 150 MHz by feeder links of non-geostationary-satellite systems in the mobile-satellite service shall be made in accordance with Resolution **114 (WRC-95)**;
- prior to 1 January 2010, the requirements of existing and planned international standard systems for the aeronautical radionavigation service which cannot be met in the 5 000-5 091 MHz band, shall take precedence over other uses of this band;
- after 1 January 2008, no new assignments shall be made to stations providing feeder links of non-geostationary mobile-satellite systems;
- after 1 January 2010, the fixed-satellite service will become secondary to the aeronautical radionavigation service.

Two MSS systems have implemented spacecraft tracking and control operations and one system has begun commercial service using the 5 091 – 5 150 MHz band for transmitting communications traffic, as well as, command signals, from gateway earth stations to the non-GSO spacecraft. These systems are successfully coexisting with the ARNS. Furthermore, civil aviation has not expanded its use to the band 5 091 - 5 150 MHz for MLS. ICAO is looking at alternatives to the instrument landing system (such as greater MLS implementation) before an all-weather Global Navigation Satellite System capability is available. There has been successful coordination between the FSS and ARNS based on Recommendation ITU-R **S.1342**, "Method for determining coordination distances, in the 5 GHz band, between the international standard microwave landing system in the aeronautical radionavigation service and non-geostationary mobile satellite service stations providing feeder uplink services." These studies showed that compatibility between MLS receivers and MSS feeder links (Earth-to-space) could exist if sufficient geographical separation exists between the two stations. As a result, Recommendation ITU-R **S.1342** was adopted to trigger coordination between the two operators to determine the acceptability of an MSS site, possibly with or without restrictions.

Proposal:

USA/ /1
NOC

5.444

Reasons: The allocations and conditions specified in the footnote are sufficient to accommodate both the ARNS and FSS for the foreseeable future.

USA/ /2
NOC

5.444A

Reasons: The allocations and conditions specified in the footnote are sufficient to accommodate both the ARNS and FSS for the foreseeable future.

USA/ /3
MOD

RESOLUTION 114 (WRC-~~95~~03)

Use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite service)

Reasons: Editorial

resolves

1 that the provisions of this Resolution and of Nos. **5.444** and **5.444A** shall enter into force on 18 November 1995;

2 that administrations authorizing stations providing feeder links for non-GSO mobile-satellite systems in the frequency band 5 091-5 150 MHz shall ensure that they do not cause harmful interference to stations of the aeronautical radionavigation service;

USA/ /4
MOD

3 that the allocation to the aeronautical radionavigation service and the fixed-satellite service in the frequency band 5 091-5 150 MHz should be reviewed at ~~WRC-01~~a future competent WRC,

Reasons: The dates in the resolution are obsolete. By changing the date to a future competent WRC leaves the option to consider the sharing of the band between MSS feeder links and ARNS at an appropriate time.

urges administrations

1 when authorizing stations of the aeronautical radionavigation service, to assign frequencies giving priority to the band below 5 091 MHz;

2 when assigning frequencies in the band 5 091-5 150 MHz before 1 January 2010 to stations of the aeronautical radionavigation service or to stations of the fixed-satellite service providing feeder links

of the non-GSO mobile-satellite service (Earth-to-space), to take all practicable steps to avoid mutual interference between them,

instructs ITU-R

1 to study the technical and operational issues relating to sharing of this band between the aeronautical radionavigation service and the fixed-satellite service providing feeder links of the non-GSO mobile-satellite service (Earth-to-space);

USA/ /5
MOD

2 to bring the results of these studies to the attention of ~~WRC-01~~a future competent WRC,

Reasons: The dates in the resolution are obsolete. By changing the date to a future competent WRC leaves the option for instructing the ITU-R to study the sharing of the band between MSS feeder links and ARNS at an appropriate time.